(57) Claim 1.   A game machine control system for
controlling a plurality of game machines, comprising :

a game machine control circuit provided
in each game machine ;

a device control circuit provided in each
game machine, for reading out data stored in the
associated game machine control circuit ;

an in-line control circuit for temporarily
storing data read out by each device control circuit ;

a computer for designating game machines
for reading out data thereof, collecting the read-out
data through said device control circuits and in-line
control circuit and processing the collected data ;

a memory for storing the processed data
from said computer ; and

means for providing the processed data.

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<u>C O M P L E T E   S P E C I F I C A T I O N</u>

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Complete Specification for the invention entitled:

"GAME MACHINE CONTROL SYSTEM"

The following statement is a full description of this invention including the best method of performing it known to us:-

The present invention relates to a game machine control system which is used for collecting from a plurality of game machines data concerning the operating status of these machines.

The game of a slot machine is started by inserting coin (or token), whereby a plurality of juxtaposed reels are rotated altogether. The reels are stopped one after another when a predetermined period of time has passed or when a stop button is depressed. If the combination of displayed patterns of the stopped reels is a win combination, coins or tokens are paid back in number corresponding to the probability, with which the win combination will occur.

In a prior art slot game machine, the game is controlled by a microcomputer which is provided in the game machine body. In some game machines, data concerning the number of inserted coins, number of paid-back coins, number of games played, etc. are produced using a microcomputer, the produced data being displayed on a numerical display which is provided in the game machine body.

In the slot game machine including microcomputer noted above, the produced data is collected at a predetermined interval. However, the data has to be collected by opening the door of each machine and

observing the numerical display, the way of data collection being thus very cumbersome.

The primary object of the invention is to provide a game machine control system which can readily collect operating status data from a plurality of game machines.

The above object of the invention is attained by the provision of a computer, which is connected to a game machine control circuit provided in each game machine and collects the game machine data. The data obtained in the computer is read out therefrom and processed, and the processed data is output from an output unit. In this way, data about individual game machines can be readily collected.

Additionally, if a trouble detection program is stored in the computer, such data as the machine number of a machine in trouble, spot of trouble, etc. can be displayed on a display unit such as a CRT. Further, in the event of occurrence of a trouble in a game machine, the operation of the machine may be inhibited to avoid erroneous operation. Furthermore, each game machine control circuit may be controlled such as to increase or reduce the probability of occurrence of win pattern combinations.

The invention will now be described in conjunction with an embodiment thereof with reference to the accompanying drawing.

A plurality of slot game machines 1a to 1n are schematically shown resepctively including game machine control circuit 2a to 2n and device control circuits 3a to 3n. In this embodiment, a number allotted to each of the machines 1a to 1n consists of 7 bits, so that up to 128 machines can be accomodated for control. Of course more machines can be accomodated for control by increasing the available bits. A microcomputer is commonly used as each of the game machine control circuits 2a to 2n, controlling the operation concerning the game such as the rotation of reels and paying of coins. In addition to the game operation control, the game machine control circuits 2a to 2n produce operating status data representing the number of games played, number of coins inserted, number of coins paid back, prevailing state of machine, i.e., whether the machine is being used for a game or not, etc., and store these data in memory. The device control circuits 3a to 3n control the reading of data from the game machine control circuits 2a to 2n.

Data read out by the device control circuits 3a to 3n is supplied through an interface circuit 4 to in-line control circuit 5 and temporarily stored therein. The data stored in the in-line control circuit 5 is read into a computer 6. The computer 6 processes the input data, e.g., accumulates it to

obtain daily, weekly and monthly data which are stored in a memory 7. The computer 6 desirably has graph producing functions.

The data stored in the memory 7 may be displayed on a display 8 such as a CRT or used to produce hard copy in a printer 9.

An example of operation according to the invention will now be described. The slot game machines 1a to 1n are allotted machine numbers, and the computer 6 sequentially designate the machine numbers in a time sharing manner, for instance. The designated machine numbers are temporarily stored in the in-line control circuit 5 to be fed through the interface circuit 4 to the individual device control circuits 3a to 3n. Each of the device control circuits 3a to 3n compares the sequentially input machine numbers to its own machine number and, when it detects a coincidence of numbers, reads out data stored in the associated game machine control circuit, e.g., 3a, and feed it through the interface circuit 4 to the in-line control circuit 5. The data supplied to the in-line control circuit 5 is temporarily stored therein and fed to the computer 6. The computer 6 processes the input data. The result is stored is in the memory 7 and, if necessary, is displayed on the display 8 or provided as hard copy from the printer 9.

The arrangement described above according to the invention can read out and process data representing the operating status of a plurality of game machines, so that it can gratly save time and labor for the data collection.

The Claims defining this invention are as follows: -

1. A game machine control system for
controlling a plurality of game machines, comprising :
a game machine control circuit provided
in each game machine ;
a device control circuit provided in each
game machine, for reading out data stored in the
associated game machine control circuit ;
an in-line control circuit for temporarily
storing data read out by each device control circuit ;
a computer for designating game machines
for reading out data thereof, collecting the read-out
data through said device control circuits and in-line
control circuit and processing the collected data ;
a memory for storing the processed data
from said computer ; and
means for providing the processed data.

2. The game machine control system according
to claim 1, wherein each said game machine control
circuit is a microcomputer.

3. The game machine control circuit according
to claim 1, wherein said processed data providing
means is a printer for providing hard copy.

4. The game machine control system according
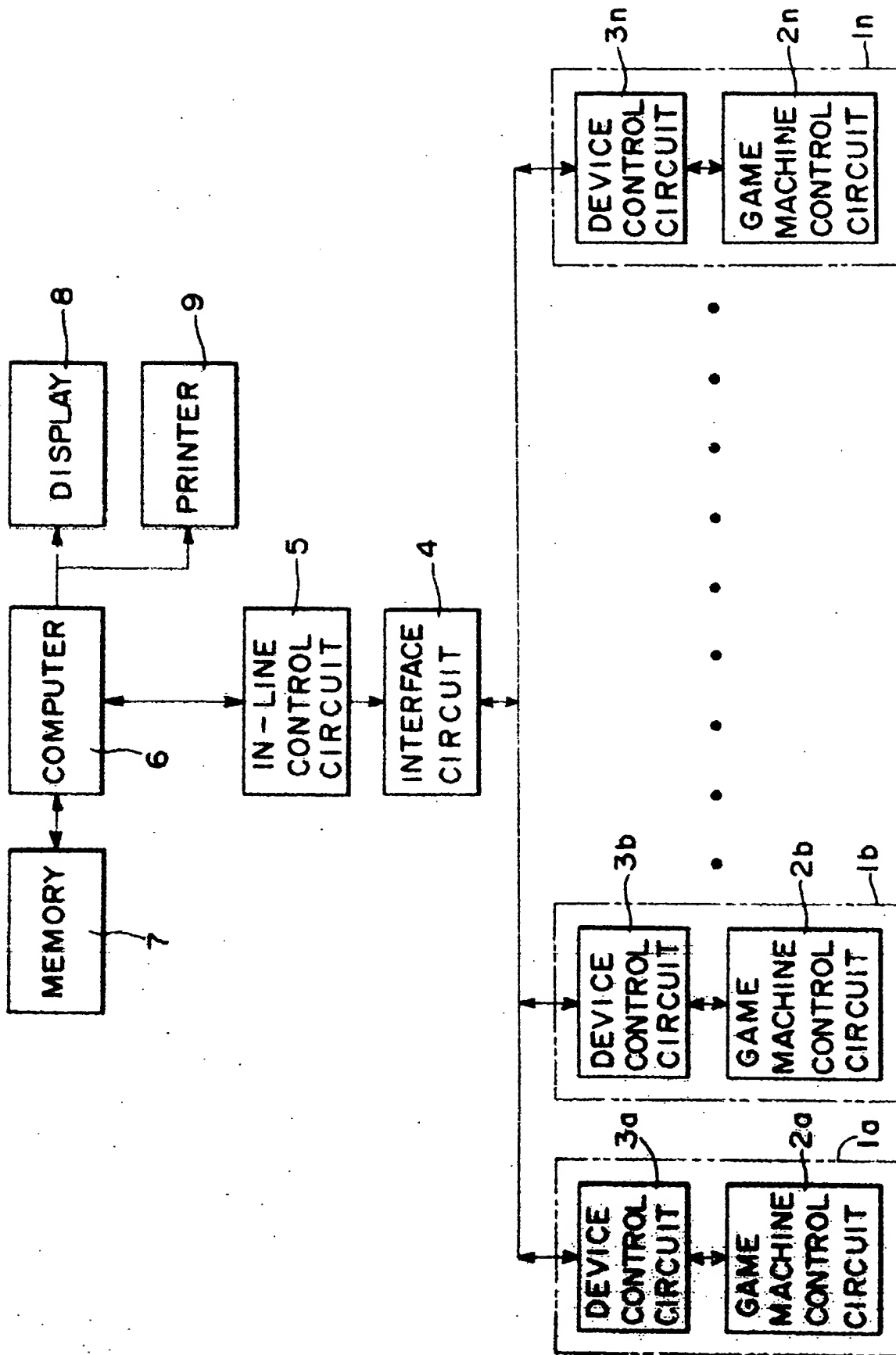to claim 1, wherein said processed data providing

means is a display for providing soft copy.
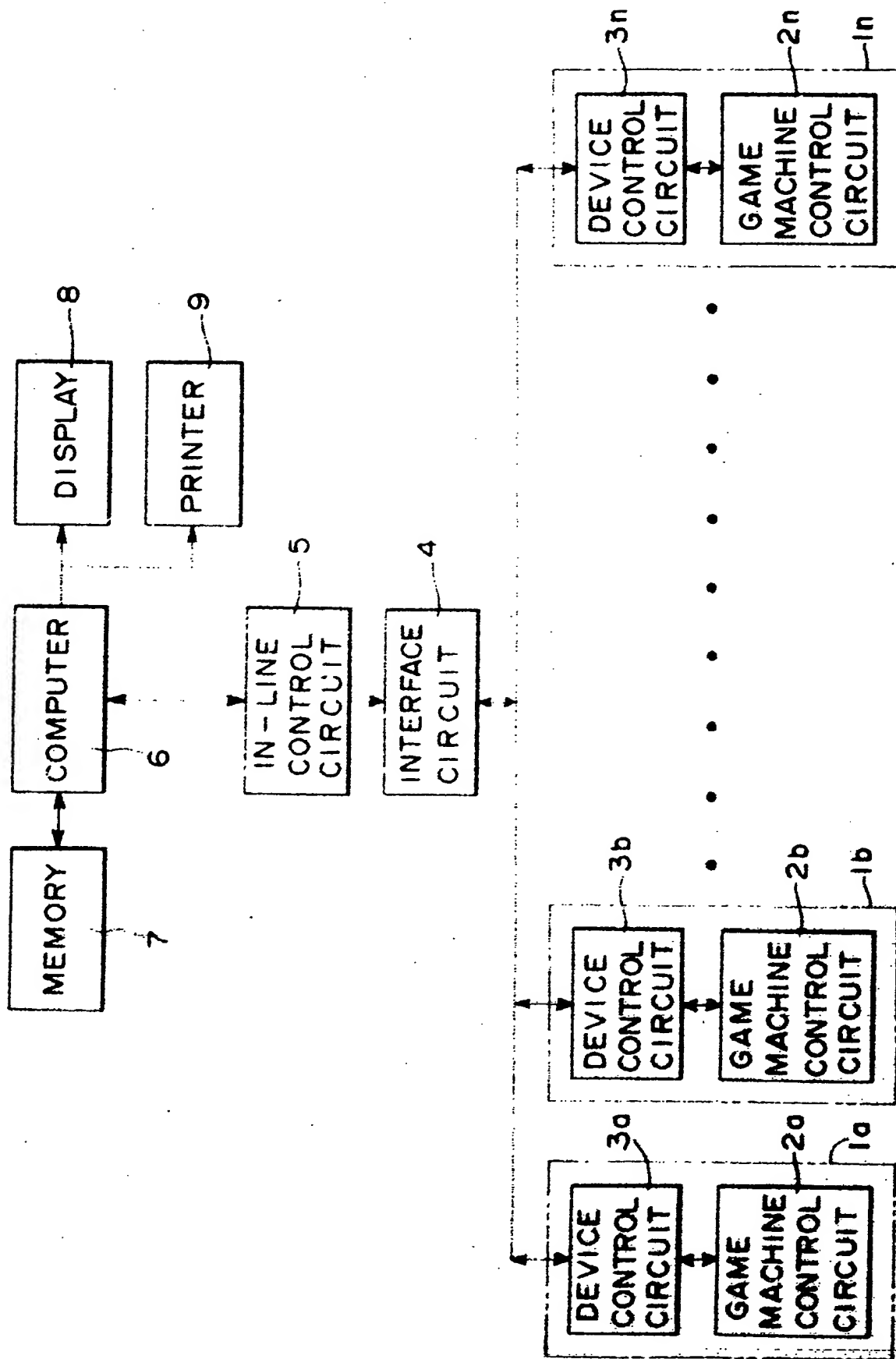
Dated this 20th day of March 1984

KABUSHIKI KAISHA UNIVERSAL

BY:

Patent Attorney for the Applicant
H.R. HODGKINSON & CO

| | | | | DISPLAY | 8 |
| | | | | PRINTER | 9 |

MEMORY 7 — COMPUTER 6 — IN-LINE CONTROL CIRCUIT 5 — INTERFACE CIRCUIT 4

DEVICE CONTROL CIRCUIT 3n — GAME MACHINE CONTROL CIRCUIT 2n — 1n

DEVICE CONTROL CIRCUIT 3b — GAME MACHINE CONTROL CIRCUIT 2b — 1b

DEVICE CONTROL CIRCUIT 3a — GAME MACHINE CONTROL CIRCUIT 2a — 1a